Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-18 (canceled)

Claim 19 (currently amended): A method for assessing the uniformity in temperature distribution in regions of a sensor comprising a sensor array which comprise conduction paths, ~~monitoring the quality of a sensor,~~ comprising:

applying a voltage to said sensor to cause said sensor to dissipate energy;

capturing an image of said sensor with an infrared camera to generate a thermographic image of said sensor while said sensor is dissipating energy;

identifying conduction paths in said sensor array as regions having a higher temperature than their surroundings;

calculating a measure of the uniformity of the temperature distribution of the image; and

assessing the uniformity of the temperature distribution is said regions, using said measure, wherein a higher measure value corresponds with a more uniform temperature distribution ~~; and~~

~~monitoring the quality of said sensor using said temperature distribution~~.

Claim 20 (original): The method according to claim 19, wherein at least one of said sensors in said array is a member selected from the group consisting of conducting/nonconducting sensors, bulk conducting polymer films, surface acoustic wave devices, fiber optic micromirrors, quartz crystal microbalances, dye impregnated polymeric coatings on optical fibers, sintered metal oxide sensors, phthalocyanine sensors, Pd-gate MOSFET devices, electrochemical cells, conducting polymer sensors, lipid coating sensors,

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identifying conduction paths in said sensor array as regions having a higher temperature than their surroundings;

calculating a measure of the uniformity of the temperature distribution of the image; and

assessing the uniformity of the temperature distribution is said regions, using said measure, wherein a higher measure value corresponds with a more uniform temperature distribution ~~; and~~

~~monitoring the quality of said sensor using said temperature distribution~~.

Claim 20 (original): The method according to claim 19, wherein at least one of said sensors in said array is a member selected from the group consisting of conducting/nonconducting sensors, bulk conducting polymer films, surface acoustic wave devices, fiber optic micromirrors, quartz crystal microbalances, dye impregnated polymeric coatings on optical fibers, sintered metal oxide sensors, phthalocyanine sensors, Pd-gate MOSFET devices, electrochemical cells, conducting polymer sensors, lipid coating sensors,

metal FET structures, carbon black-polymer composites, micro-electro-mechanical system devices, micromachined cantilevers, and micro-opto-electro-mechanical system devices.

Claim 21 (original): The method according to claim 20, wherein at least one of said sensors in said array is a conducting/nonconducting regions sensor.

Claim 22 (currently amended): A method for identifying the conducting path of a sensor comprising a sensor array, comprising:

applying a voltage to said sensor to cause said sensor to dissipate energy;

capturing an image of said sensor with an infrared camera to generate a thermographic image of said sensor while said sensor is dissipating energy; and

identifying [[said]] conduction paths in said sensor array as regions having a higher temperature than their surroundings.

Claim 23 (original): The method according to claim 22, wherein said sensor is a member selected from the group consisting of conducting/nonconducting regions sensors, bulk conducting polymer films, surface acoustic wave devices, fiber optic micromirrors, quartz crystal microbalances, dye impregnated polymeric coatings on optical fibers, sintered metal oxide sensors, phthalocyanine sensors, Pd-gate MOSFET devices, electrochemical cells, conducting polymer sensors, lipid coating sensors, metal FET structures, carbon black-polymer composites, micro-electro-mechanical system devices, micromachined cantilevers, and micro-opto-electro-mechanical system devices

Claims 24-25 (canceled)

Claim 26 (new): The method according to claim 19 wherein said measure comprises a temperature uniformity factor comprising a ratio of regions in said image that contribute to a proportion of a cumulative sum of the temperatures.